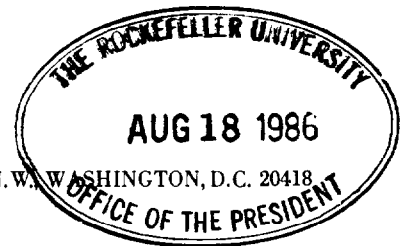




NATIONAL ACADEMY OF ENGINEERING

2101 CONSTITUTION AVENUE, N.W. WASHINGTON, D.C. 20418

August 13, 1986



HOME SECRETARY

Joshua Lederberg  
President  
The Rockefeller University  
1230 York Avenue  
New York, N.Y. 10021

CBW

Dear Josh:

This is in reply to your note regarding the comment I made at a recent CISAC meeting on defensive research in biological weapons as affected by the 1975 Treaty.

You are right that the Treaty doesn't mention "research." It proscribes "development, production and stockpiling." Thus the Treaty, in recognition of the fact that research on agents may be indistinguishable from other legitimate research for "peaceful" purposes, does not limit research in any specific way. The difficulties of verification if limitations on research had been attempted are obvious.

The Treaty also does not mention "defense." However, it limits concern to quantities of agent materials in excess of those required for work on "protection, prophylaxis and other peaceful uses." The first two of these activities, permitted in a research context, relate to military defenses as well as legitimate civilian medical concerns. Note that no distinction is made between naturally occurring biological species and those "engineered" for specific purposes. Again, it must be admitted that such a distinction would be difficult to make without unduly hampering the progress of modern biology and medicine.

Further, while the Treaty encourages the free exchange of information, it does not require that all research on biological agents be open. Here again, to impose a requirement of openness would be difficult in view of the commercial developments in biotechnology which are rapidly evolving.

Thus, an ambiguity of The Treaty exists with respect to what kinds and quantities of biological agents may be secretly made, stored and experimented with under the rubric of research activities. Perhaps this situation should be described as a potential loophole rather than an ambiguity in the Treaty but the practical consequences are the same in either case.

With best regards,

Sincerely,

Al

Alexander H. Flax